

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of forming a contact in a pixel sensor cell, comprising:

depositing a passivation layer over a substrate having pixel components;

forming a slot in the passivation layer in an area over a charge collection region of said pixel sensor cell;

implanting a dopant at an angle relative to sidewalls of the slot through said slot into said charge collection region to form a doped area in said charge collection region; and

forming a contact within said slot, the contact being in electrical connection to said doped area.

2. (Previously Presented) The method of claim 1, wherein said slot has an oblong shape.

3. (Previously Presented) The method of claim 1, wherein said slot has an elliptical shape.

4. (Previously Presented) The method of claim 1, wherein said slot has an aspect ratio having a range of about 10:1 to 5:1.

5. (Original) The method of claim 1, wherein said dopant is implanted at an angle of about 20° relative to the sidewalls.

6. (Original) The method of claim 1, wherein said charge collection region is a floating diffusion region.

7. (Original) The method of claim 1, wherein said slot is etched in an insulator layer.

8. (Original) The method of claim 1, wherein said dopant is implanted at about 35 KeV.

9. (Original) The method of claim 1, wherein said dopant is implanted at an implant depth of about 300 Å to about 400 Å.

10. (Original) The method of claim 1 wherein said dopant is phosphorous.

11. (Previously presented) A method of forming a contact in a pixel sensor cell comprising:

depositing a passivation layer over a substrate having pixel components;

forming a blocking layer extending over a portion of a charge collection region of said pixel sensor cell;

etching a slot, having sidewalls, into the passivation layer over said charge collection region, wherein said slot extends to contact said charge collection region over portions not covered by said blocking layer;

implanting a dopant at an angle relative to the sidewalls of the slot through said slot into said charge collection region; and

forming a contact within said slot.

12. (Original) The method of claim 11, wherein said blocking layer includes at least one of polysilicon and silicon nitride.

13. (Previously presented) The method of claim 11, wherein a cross-section of said slot has an oblong shape.

14. (Previously presented) The method of claim 11, wherein a cross-section of said slot has an elliptical shape.
 15. (Previously presented) The method of claim 11, wherein said slot has an aspect ratio that is within a range of about 10:1 to 5:1.
 16. (Original) The method of claim 11, wherein said dopant is implanted at an angle of about 20° relative to the sidewalls.
 17. (Original) The method of claim 11, wherein said charge collection region is a floating diffusion region.
 18. (Original) The method of claim 11, wherein said slot is etched in an insulator layer.
 19. (Original) The method of claim 11, wherein said dopant is implanted at about 35 KeV.
 20. (Previously presented) The method of claim 11, wherein said dopant is implanted at to a depth in the substrate of about 300 Å to about 400 Å.
 21. (Original) The method of claim 11, wherein said dopant is phosphorous.
- 22-38 (Canceled)
39. (New) A method of forming a contact in a pixel sensor cell, comprising:
 - depositing a passivation layer over a substrate having pixel components;
 - forming a slot in the passivation layer in an area over a floating diffusion region of said pixel sensor cell;

implanting a dopant at an angle relative to sidewalls of the slot through said slot into said floating diffusion region; and

forming a contact within said slot to said floating diffusion region.

40. (New) The method of claim 39, wherein said slot has one of an elliptical or an oblong shape.

41. (New) The method of claim 39, wherein said dopant is implanted at an angle of about 20° relative to the sidewalls.

42. (New) The method of claim 39, wherein the act of implanting a dopant comprises forming a phosphorus plug.

43. (New) The method of claim 39, wherein said dopant is implanted at an implant depth of about 300 Å to about 400 Å.